```
       RAW SEQUENCE LISTING                  DATE: 04/30/2001
       PATENT APPLICATION:  US/09/834,095    TIME: 11:08:02

           Input Set : A:\800-026US1 Sequence listing.txt.txt       ENTERED
           Output Set: N:\CRF3\04302001\I834095.raw
```

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         4 <110> APPLICANT: Kawaoka, Yoshihiro
         6 <120> TITLE OF INVENTION: VIRUSES COMPRISING MUTANT ION CHANNEL PROTEIN
         8 <130> FILE REFERENCE: 800.026US1
C-->  10 <140> CURRENT APPLICATION NUMBER: US/09/834,095
C-->  10 <141> CURRENT FILING DATE: 2001-04-12
        10 <150> PRIOR APPLICATION NUMBER: US 60/197,209
        11 <151> PRIOR FILING DATE: 2000-04-14
        13 <160> NUMBER OF SEQ ID NOS: 35
        15 <170> SOFTWARE: FastSEQ for Windows Version 4.0 ·
        17 <210> SEQ ID NO: 1
        18 <211> LENGTH: 19
        19 <212> TYPE: DNA
        20 <213> ORGANISM: Artificial Sequence
        22 <220> FEATURE:
        23 <223> OTHER INFORMATION: A primer
        25 <400> SEQUENCE: 1
        26 aagagggtca cttgaatcg                                        19
        28 <210> SEQ ID NO: 2
        29 <211> LENGTH: 18
        30 <212> TYPE: DNA
        31 <213> ORGANISM: Artificial Sequence
        33 <220> FEATURE:
        34 <223> OTHER INFORMATION: A primer
        36 <400> SEQUENCE: 2
        37 actgttgctg cgagtatc                                         18
        39 <210> SEQ ID NO: 3
        40 <211> LENGTH: 18
        41 <212> TYPE: DNA
        42 <213> ORGANISM: Artificial Sequence
        44 <220> FEATURE:
        45 <223> OTHER INFORMATION: A primer
        47 <400> SEQUENCE: 3
        48 gttgttgctc caactatc                                         18
        50 <210> SEQ ID NO: 4
        51 <211> LENGTH: 18
        52 <212> TYPE: DNA
        53 <213> ORGANISM: Artificial Sequence
        55 <220> FEATURE:
        56 <223> OTHER INFORMATION: A primer
        58 <400> SEQUENCE: 4
        59 gttgttgctg cgaacatc                                         18
        61 <210> SEQ ID NO: 5
        62 <211> LENGTH: 22
        63 <212> TYPE: DNA
        64 <213> ORGANISM: Artificial Sequence
        66 <220> FEATURE:
        67 <223> OTHER INFORMATION: A primer
```

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 69 <400> SEQUENCE: 5
 70 gttgttatca ttgggatctt gc                                           22
 72 <210> SEQ ID NO: 6
 73 <211> LENGTH: 18
 74 <212> TYPE: DNA
 75 <213> ORGANISM: Artificial Sequence
 77 <220> FEATURE:
 78 <223> OTHER INFORMATION: A primer
 80 <400> SEQUENCE: 6
 81 cccaatgata ctcgcagc                                                18
 83 <210> SEQ ID NO: 7
 84 <211> LENGTH: 25
 85 <212> TYPE: DNA
 86 <213> ORGANISM: Artificial Sequence
 88 <220> FEATURE:
 89 <223> OTHER INFORMATION: A primer
 91 <400> SEQUENCE: 7
 92 atcttgcact tgatattggc aattc                                        25
 94 <210> SEQ ID NO: 8
 95 <211> LENGTH: 62
 96 <212> TYPE: DNA
 97 <213> ORGANISM: Artificial Sequence
 99 <220> FEATURE:
100 <223> OTHER INFORMATION: A primer
102 <400> SEQUENCE: 8
103 caccagtgaa ctggcgacag ttgagtagat cgccagaatg tcacttgaat cgttgcatct    60
104 gc                                                                 62
106 <210> SEQ ID NO: 9
107 <211> LENGTH: 57
108 <212> TYPE: DNA
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: A primer
114 <400> SEQUENCE: 9
115 cttttggtct ccctgggggc aatcagtttc tggatggatc gtcttttttt caaatgc        57
117 <210> SEQ ID NO: 10
118 <211> LENGTH: 68
119 <212> TYPE: DNA
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: A primer
125 <400> SEQUENCE: 10
126 gcttagtatc aattgtattc catttatgat tgatatccaa atgctgtcac ttgaatcgtt    60
127 gcatctgc                                                           68
129 <210> SEQ ID NO: 11
130 <211> LENGTH: 63
131 <212> TYPE: DNA
132 <213> ORGANISM: Artificial Sequence
134 <220> FEATURE:
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PATENT APPLICATION: US/09/834,095   TIME: 11:08:02

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Output Set: N:\CRF3\04302001\I834095.raw

```
135 <223> OTHER INFORMATION: A primer
137 <400> SEQUENCE: 11
138 attataggag tcgtaatgtg tatctcaggg attaccataa tagatcgtct tttttttcaaa       60
139 tgc                                                                      63
141 <210> SEQ ID NO: 12
142 <211> LENGTH: 33
143 <212> TYPE: DNA
144 <213> ORGANISM: Artificial Sequence
146 <220> FEATURE:
147 <223> OTHER INFORMATION: A sequence from the pHH21 vector
149 <400> SEQUENCE: 12
150 gggttattgg agacggtacc gtctcctccc ccc                                     33
152 <210> SEQ ID NO: 13
153 <211> LENGTH: 18
154 <212> TYPE: DNA
155 <213> ORGANISM: Artificial Sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: The end of a PCR product
160 <221> NAME/KEY: misc_feature
161 <222> LOCATION: (1)...(18)
162 <223> OTHER INFORMATION: n = A, T, C or G
164 <400> SEQUENCE: 13
165 cgtctcntat tagtagaa                                                      18
167 <210> SEQ ID NO: 14
168 <211> LENGTH: 16
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
173 <223> OTHER INFORMATION: The end of a PCR product
175 <221> NAME/KEY: misc_feature
176 <222> LOCATION: (1)...(16)
177 <223> OTHER INFORMATION: n = A, T, C or G
179 <400> SEQUENCE: 14
180 ttttgctccc ngagac                                                       16
182 <210> SEQ ID NO: 15
183 <211> LENGTH: 11
184 <212> TYPE: DNA
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: The end of a PCR product following digestion with
189       BsmBI
191 <400> SEQUENCE: 15
192 tattagtaga a                                                             11
194 <210> SEQ ID NO: 16
195 <211> LENGTH: 10
196 <212> TYPE: DNA
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: The end of a PCR product following digestion with
```

```
201       BsmBI
203 <400> SEQUENCE: 16
204 gggagcaaaa                                                      10
206 <210> SEQ ID NO: 17
207 <211> LENGTH: 15
208 <212> TYPE: DNA
209 <213> ORGANISM: Artificial Sequence
211 <220> FEATURE:
212 <223> OTHER INFORMATION: A sequence from the pHH21 vector including
213       influenzal viral cDNA that was cloned into the
214       vector
216 <400> SEQUENCE: 17
217 gggttattag tagaa                                                15
219 <210> SEQ ID NO: 18
220 <211> LENGTH: 13
221 <212> TYPE: DNA
222 <213> ORGANISM: Artificial Sequence
224 <220> FEATURE:
225 <223> OTHER INFORMATION: A sequence from the pHH21 vector including
226       influenzal viral cDNA that was cloned into the
227       vector
229 <400> SEQUENCE: 18
230 ttttgctccc ccc                                                  13
232 <210> SEQ ID NO: 19
233 <211> LENGTH: 80
234 <212> TYPE: DNA
235 <213> ORGANISM: Artificial Sequence
237 <220> FEATURE:
238 <223> OTHER INFORMATION: A primer
240 <400> SEQUENCE: 19
241 cacacacgtc tcgtattagt agaaacaagg tcgttttaa actattcgac actaattgat    60
242 ggccatccga attcttttgg                                           80
244 <210> SEQ ID NO: 20
245 <211> LENGTH: 67
246 <212> TYPE: DNA
247 <213> ORGANISM: Artificial Sequence
249 <220> FEATURE:
250 <223> OTHER INFORMATION: A primer
252 <400> SEQUENCE: 20
253 cacacacgtc tccgggagcg aaagcaggtc aattatattc aatatggaaa gaataaaaga    60
254 actaagg                                                         67
256 <210> SEQ ID NO: 21
257 <211> LENGTH: 89
258 <212> TYPE: DNA
259 <213> ORGANISM: Artificial Sequence
261 <220> FEATURE:
262 <223> OTHER INFORMATION: A primer
264 <400> SEQUENCE: 21
265 cacacacgtc tcgtattagt agaaacaagg cattttttca tgaaggacaa gctaaattca    60
```

RAW SEQUENCE LISTING   DATE: 04/30/2001
PATENT APPLICATION: US/09/834,095   TIME: 11:08:02

Input Set : A:\800-026US1 Sequence listing.txt.txt
Output Set: N:\CRF3\04302001\I834095.raw

```
266 ctatttttgc cgtctgagct cttcaatgg                                        89
268 <210> SEQ ID NO: 22
269 <211> LENGTH: 67
270 <212> TYPE: DNA
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: A primer
276 <400> SEQUENCE: 22
277 cacacacgtc tccgggagcg aaagcaggca aaccatttga atggatgtca atccgacttt        60
278 acttttc                                                                67
280 <210> SEQ ID NO: 23
281 <211> LENGTH: 103
282 <212> TYPE: DNA
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: A primer
288 <400> SEQUENCE: 23
289 ccaacccgtc tcctattagt agaaacaagg tacttttttg gacagtatgg atagcaaata        60
290 gtagcattgc cacaactatc tcaatgcatg tgtgaggaag gag                        103
292 <210> SEQ ID NO: 24
293 <211> LENGTH: 67
294 <212> TYPE: DNA
295 <213> ORGANISM: Artificial Sequence
297 <220> FEATURE:
298 <223> OTHER INFORMATION: A primer
300 <400> SEQUENCE: 24
301 ccaacccgtc tccgggagcg aaagcaggta ctgattcaaa atggaagatt ttgtgcgaca        60
302 atgcttc                                                                67
304 <210> SEQ ID NO: 25
305 <211> LENGTH: 40
306 <212> TYPE: DNA
307 <213> ORGANISM: Artificial Sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: A primer
312 <400> SEQUENCE: 25
313 cacacacgtc tcctattagt agaaacaagg gtgttttttcc                             40
315 <210> SEQ ID NO: 26
316 <211> LENGTH: 45
317 <212> TYPE: DNA
318 <213> ORGANISM: Artificial Sequence
320 <220> FEATURE:
321 <223> OTHER INFORMATION: A primer
323 <400> SEQUENCE: 26
324 cacacacgtc tccgggagca aaagcagggg aaaataaaaa caacc                        45
326 <210> SEQ ID NO: 27
327 <211> LENGTH: 47
328 <212> TYPE: DNA
329 <213> ORGANISM: Artificial Sequence
331 <220> FEATURE:
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VERIFICATION SUMMARY
PATENT APPLICATION: US/09/834,095

DATE: 04/30/2001
TIME: 11:08:03

Input Set : **A:\800-026US1 Sequence listing.txt.txt**
Output Set: **N:\CRF3\04302001\I834095.raw**

L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:180 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14